

REMARKS

The instant invention is directed to a packaging material having enhanced light shielding effect. An advantage of the invention is an enhanced light shielding effect notwithstanding the use of a surprisingly small quantity of light absorbing particles such as carbon black. The present invention realizes this advantage, at least in part, by the use of light reflecting particles in combination with the light absorbing (carbon black) particles. The combination achieves the added advantage of minimizing the blackening effect commonly associated with the use of carbon black as light-shielding material. The present invention achieves this dual objective by uniformly distributing the light reflecting particles within the compound of a single plastic layer while simultaneously randomly distributing the light absorbing particles (e.g., carbon black) within the same compound of the same plastic layer.

The disclosure showing this combination of uniform distribution of light reflecting particles and random distribution of light absorbing particles within the same compound forming a single layer is disclosed within the specification at page 5, lines 25-29 and also in Figure 1.

The Examiner has relied upon the Akao reference (U.S. Patent No. 5,492,741) as allegedly anticipating the claimed invention. The Akao reference, however, does not appear to teach or suggest the use of a combination of a light absorbing (or light shielding) material with a light reflecting material. Nor does the Akao reference teach or suggest the combination of any two materials identified by that reference as light shielding materials

within the same layer. While it is true that the Akao reference describes the use of various light shielding materials, including those classified within the instant specification as light reflecting materials, the Akao reference does not appear to teach or suggest the use of both carbon black and another light shielding material (or light reflecting material) within the same layer. Thus, for example, the Akao reference describes a multitude of materials that can be used as light shielding materials as that term is defined within the Akao reference, but the Akao reference does not teach or suggest combining those various materials in a single layer.

This is further illustrated in the examples. The examples of the Akao reference describe various layers incorporating light shielding materials, albeit the majority of which are carbon black, and particularly furnace carbon black. However, none of the examples incorporate more than a single light shielding or light reflecting material in a single layer. *See, e.g., Example III, which describes the wear-resistant flexible sheet 3a which has a coating of titanium dioxide, which layer is combined with the thermoplastic resin layer 7a in which is incorporated furnace carbon black (3 weight %).*

Similarly, the light shielding materials described within the '741 reference at columns 15, 16, 17, 18 and 19, are varied and span the materials embraced by the instant claims, *e.g., carbon black and various mineral particles.* Nonetheless, the reference does not appear to suggest the particular combination of a carbon black material with a mineral particle material in a single layer to achieve a light shielding and/or light reflective effect.

Thus, the '741 reference fails to teach or suggest the combination required by the instant claims.

Furthermore, the Akao reference teaches that the use of the light shielding materials described therein are substantially interchangeable, and thus useful in the same weight ranges. That is, the '741 references teaches that a suitable content of the light-shielding material is 0.01 to 30 weight %. While it appears that the reference seems to acknowledge that carbon black and aluminum powder are particularly effective in light-shielding ability, and therefore require a lower content in weight %, *e.g.*, "0.05 to 20 weight %, preferably, 0.1 to 10 weight %, particularly preferably 0.2 to 7 weight percent", there is no teaching or suggestion to combine the various materials, much less how the materials might be combined with a light reflecting material to minimize the darkening effect of a light shielding material such as carbon black.

Further, the instant claims require differing concentration ranges for the light-shielding and light-reflecting materials. The carbon black must be present in an amount ranging from 0.04 to about 1%, a range substantially different from that in the cited reference; whereas the mineral particles must be present in a quantity between approximately 3 and 80 weight %. Thus the two constituents have differing and non-overlapping concentration ranges within the compound of the singular plastic layer. Although both overlap with the various ranges recited in Akao, the Akao reference does not teach separate ranges, and, in particular, does not teach or suggest these ranges for the different materials. Thus, the reference fails to teach or suggest that one could or should

introduce carbon black in a concentration of only about 0.04 % to about 1 %, while restricting the light-reflecting mineral particles to quantites greater than 3% and up to about 80% of the total weight of the plastic layer.

The Examiner's action argues that the Akao reference teaches the blending of light shielding materials to ensure light shielding ability and to improve other physical properties, citing column 15, line 63-65. However, applicants respectfully submit that Akao is referring to the blending of the light shielding material with the plastic of the *e.g.*, heat sealing layer. The cited passage does not teach or suggest the combination of various types light shielding material in a single layer.

Likewise, at column 16, lines 44 - 64, the reference describes the blending of various constituents, including a light shielding material, to improve certain physico-chemical characteristics of the compound and ultimately the plastic layer. However, the passage does not teach or suggest the combination of various light shielding materials within a single layer, and specifically does not teach or suggest teh combination of materials referred to within the instant specification as light-shielding and light-reflecting materials; nor does it suggest any advantage to combining specifically carbon black and mineral particles that are otherwise lumped together within the Akao reference as interchangeable light shielding materials.

The Examiner's Action also argues that the Akao reference teaches the blending of an anti-blocking agent such as calcium carbonate or talc in the layers of the invention. However, again, Akao fails to teach or suggest that the anti-blocking agent must be

included in the same layer as the light absorbing carbon black material; nor does it teach or suggest that the anti-blocking agent must be uniformly distributed within that layer while the carbon black must be randomly distributed within the same layer.

Likewise, the Examiner's Action argues that the Akao reference teaches the blending of inorganic material having ion exchange ability such as inorganic clay or mica with the light shielding material of the invention, citing column 32, lines 4-39. However, that passage does not teach or suggest the use of carbon black in combination with the mineral particles as claimed in the instant invention. Rather, according to the Akao reference the combination can include any of various light shielding materials in combination with the eight various materials that it states might be utilized as ion exchange materials. Furthermore, the reference does not specifically teach that the inorganic material having ion exchange ability is to be incorporated within the same compound such that it is uniformly distributed within the resulting layer, nor does it suggest that the light shielding material, which must be in the form of carbon black, is randomly distributed around the ion exchange material within that same layer.

Furthermore, while the Akao reference describes the addition of oxygen scavenger materials, and states that the photographic photosensitive material of the Akao reference can incorporate an oxygen scavenger material as a single material or a combination of them, the oxygen scavengers so identified by the Akao reference do not include both carbon black and mineral particles as required by the instant claims. Thus, the citation suggesting a combination of oxygen scavenger materials still fails to teach or even suggest

the claimed invention. And again, the reference is unclear about the composition or orientation within the overall material of the oxygen scavenger material. That is, the reference fails to teach or suggest that the oxygen scavenger material must be within the same layer as the carbon black and/or mineral particles, and likewise fails to teach or suggest that the oxygen scavenger is either uniformly or randomly distributed within the singular plastic layer.

The Examiner's Action further argues that Akao teaches the blending of calcium carbonate or clay in an amount of 0.1 to 60 weight % in the layers of the invention, citing column 33, line 61 - column 34, line 3. However, as the Examiner's Action acknowledges, the Akao reference teaches the inclusion of such materials within the various layers of the invention. The Akao reference does not teach or suggest that those materials must be included within the same layer as the light shielding carbon black and/or the light reflecting mineral particles, nor does the reference teach or suggest that such material must be uniformly and/or randomly distributed within the singular layer as required by the instant invention.

With regard to claim 9, the Examiner's Action asserts that Akao teaches the light shielding bag for photosensitive materials comprising an intermediate plastic layer and two outer layers, wherein the intermediate layer comprises about 0.4 % to about 1.0 % by weight light absorbing material and about 3 % to about 80 % light reflecting material and an ultraviolet absorber. However, as argued above, applicants respectfully submit that Akao fails to teach the combination of the light-shielding and light-reflecting materials

within the same layer, and likewise fails to teach or suggest that the light absorbing material is randomly distributed within layer and the light reflecting material is uniformly distributed within the layer. Thus, the Akao reference fails to teach or suggest the claimed invention.

The Akao reference merely recites a litany of various materials that are commonly incorporated in materials for packaging photosensitive photographic products. The materials are diverse, and the recommended concentration ranges within the packaging material as a whole is extremely broad. There is no teaching within the reference of extracting from all those materials the claimed materials in the respective claimed concentration ranges and incorporating them into a single layer to absorb light and prevent the transmission of ultra-violet light. Likewise, there is no teaching with the reference of a packaging material that meets all the claimed limitations. Accordingly, the Akao reference does not anticipate the claimed invention. Reconsideration and withdrawal of the rejection is respectfully requested.

Likewise, the Akao reference does not suggest the claimed invention, and so does not render the invention obvious. Akao fails to suggest the combination of carbon black and light reflecting mineral particles. While Akao teaches that one of ordinary skill may resort to the various materials of the instant claims, there is nothing within the Akao reference that would motivate one of skill in the art to combine the claimed materials within a single layer. Further, there is nothing within the reference that would motivate one of skill in the art to combine those materials at the specific concentration ranges

required by the instant claims. Accordingly, there is no teaching, suggestion, or motivation to select the claimed materials from the diverse materials of the Akao reference; and even if there were, there is no teaching or suggestion to combine such materials in the claimed concentration ranges, nor is there the requisite suggestion that the materials be so combined in a single layer of a single compound.

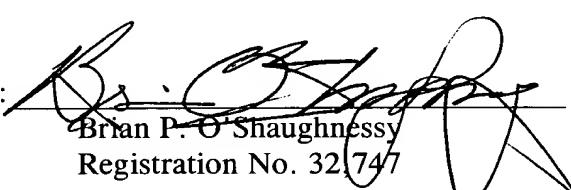
In view of the foregoing Remarks, it is respectfully submitted that the pending claims are in condition for allowance. Applicants respectfully request formal notification to that effect. If, however, the Examiner perceives any remaining impediments to such a notice of allowability, the Examiner is encouraged to contact Applicant's attorney at the number provided below. It is respectfully submitted that such informal communication will expedite examination and disposal of the instant case.

Respectfully submitted,

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